

Remarks

Claim 1 has been amended to more clearly define the invention. Basis for the amendments can be found in claims 2, 5 and 10-12 as originally filed and also in the specification page 9 line 6, page 10 line 22 to page 11 line 2, page 11 lines 28-29, page 16 lines 21-19 and page 18 lines 14-20, and also in Figures 15b and 22. Claims 16 and 19 have been amended in a corresponding manner to claim 1. Claim 8 has been amended to more clearly define the invention and basis can be found in claims 18 and 21 as originally filed and also in the specification on page 19 lines 25-27. Claims 10 and 11 have been amended to correct their dependencies and to ensure that they correspond with the amended claim 1.

In section 2 of the office action the Examiner rejects claim 1 under 35 U.S.C. §102(e) as being anticipated by Andrews (US 6,317,098). Reconsideration is requested.

Andrews describes "communication employing triply-polarized transmissions" (Andrews, title). Andrews does not disclose "a dual polarized antenna array" (this application, claim 1) but instead uses "three dipole antennas that are spatially orthogonal to each other" (Andrews, abstract and Figure 1). Andrews also does not disclose "a beamformer for coherently combining elements of a same polarisation to form a first directional beam having a first polarisation and a second directional beam having a second polarisation" (this application, claim 1). Andrews does not disclose, teach or even suggest use of a beamformer. Additionally it is not possible for Andrews to show combining elements of a same polarization because Andrews only contains one dipole for each polarization (Andrews, Figure 1). The present invention as defined by the amended claim 1 is therefore clearly distinct from the device of Andrews as Andrews does not disclose features (i) and (ii) of the amended claim 1. The Applicants respectfully submit that the rejection of claim 1 cannot now be sustained.

The Examiner also cites Runyon (US 6,067,053) which describes a "dual polarized array antenna" (Runyon, title). As described in the previous response mailed October 8, 2003, Runyon uses a "substantially rotationally symmetric radiation pattern" (Andrews, column 2 lines 56-57) and does not teach use of "a first directional beam having a first polarisation and a second directional beam having a second polarisation" (this application, claim 1). Additionally, Runyon does not relate to MIMO and does not teach that "the first and second beams provide two independent MIMO channels" (this application, claim 1). Instead Runyon uses polarization diversity to receive a single data stream as shown in Runyon Figure 14 and in the related description. Consequently the present invention as defined by the amended claim 1 is clearly distinct from the teaching of Runyon.

Furthermore, a skilled person would not be motivated to combine the teachings of Runyon and Andrews because Andrews relates to MIMO communication and MIMO teaches that it requires a set of diverse elements where all the elements are diverse with respect to each other (as described in this application, page 8 line 33 to page 9 line 6). As the antenna of Runyon contains antenna elements which are not all diverse with respect to each other, a skilled person reading the teaching of Andrews would not combine this with the teaching of Runyon as this goes against the principles of MIMO antennas. The Applicants therefore respectfully submit that the amended claim 1 is now in condition for allowance.

In section 2 of the office action the Examiner also rejects independent claims 16 and 19 under 35 U.S.C. §102(e) as being anticipated by Andrews. These independent claims have been amended in a corresponding manner to claim 1 and the above arguments are also applicable.

In section 5 of the office action the Examiner objects to claims 10-12 because of informalities. The dependencies of these claims have been corrected.

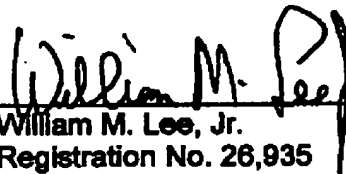
D tailed arguments are not presented in respect of th d pendent claims.
However, the arguments of the Examiner should not be taken to be accepted.

The Applicants realize that this response is being filed following a final rejection.
It is submitted that this response ought to be entered and fully considered since
not only have no new issues been raised, but rather issues have been reduced
since the Applicants have responded to each of the concerns of the Examiner
and it is believed, satisfied them.

In view of the fact that all of the Examiner's comments have been addressed
further and favorable consideration is respectfully requested.

Respectfully submitted,

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